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A Study on Portfolio Management

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Abstract

Portfolio management and investment decisions as a concept became well-known following the end of World War II, when it was recognized that investing in multiple scripts rather than placing all of one's money into a single security yielded better results. HARYMERKOWITZ, 1991 noble laureate, is credited for pioneering the notion of pairing high yielded assets with slow but steady yielding securities to attain the best correlation coefficient of shares.

1. Introduction

Portfolio management is the administration of an individual investor's portfolio by a professionally competent person ranging from a merchant banker to a portfolio corporation.

1.1 Definition

Portfolio management refers to a person's overall holdings of securities.

A portfolio is a collection of securities with its own set of returns and risks; a portfolio may or may not take on the aggregate characteristics of its constituent pieces.

As a result, a portfolio is a collection of multiple assets and/or financial instruments.

1.2 Need Of the study

Portfolio management or investing aids investors in achieving this goal by allowing them to manage their investments effectively and efficiently. The fast development of India's capital markets has provided investors with new investment opportunities. The stock market has become a popular investment option for the average person. However, in order to maintain optimum profits with minimal risk, it is necessary to be able to properly and efficiently manage assets.

As a result, the purpose of this research on "PORTFOLIO MANAGEMENT" is to investigate the role method and merits of good investment management and decision-making.

1.3 Objectives of the study

- To study about the investment decision-making process.
- To analyze the risk and return characteristics of several sample scripts.
- To understand the portfolio weights.
- To find out the portfolio that provides the best return for the least amount of risk.

1.4 Research Methodology

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Source of data for collection is made through Primary and Secondary data

- Primary data

There is no primary data for this study because it is entirely based on historical data.

- Secondary data

Prices of scripts from newspapers, websites, and some information from textbooks are updated on a daily basis.

1.5 Limitations of the study

- Only two samples were chosen for putting together a portfolio.
- We looked at the share prices of scripts over a three-month period.
- The time element is one of the project's primary limitations.
- The accuracy of this project's analysis may be hampered by the fact that the data used to analyze it was gathered from secondary sources.

2. Literature Review

PPM drew a lot of interest in the 2000s, both from a business and academic standpoint. Industries attempted to develop more PPM goods, and academics attempted to apply PPM to solve problems and achieve better results. Then, other topics such as PPM balancing and resourcing were covered. Since then, authors have described PPM from several perspectives, including programme management. Multi-project management is a term used to describe the management of multiple projects. In the late 2000s, the majority of study focused on strategic alignment in PPM, although there was still plenty of research on project selection optimization. Surveys were conducted, and new methods for IT PPM implementation were designed. centred on tools and approaches that would assist in strategic alignment researched how to use tools and procedures to achieve the aims of PPM by applying a PPM strategy to a specific selection of projects.

The project portfolio management function is able to link projects in the portfolio to the strategy through the use of selection criteria, according to the review of literature. Once the company's strategic objectives have been reduced to measurable targets, the project portfolio management function is able to link projects in the portfolio to the strategy through the use of selection criteria. Measurable objectives, according to Serra and Kunc (2015), allow managers to measure the value that would be gained. A number of studies in the literature argue that project portfolios are effective vehicles for implementing strategies (Unger, Kock, Gemunden, and Jonas, 2011). They emphasise that project portfolio management helps them overcome the issue of managing many sets of projects at the same time in order to achieve their strategic goals.

According to Unger et al. (2011), the project portfolio manager serves as a "central figure" in the project management process. With its specialised understanding of project management, the coordination unit assists senior management. “portfolio management”. “Project portfolio management (PPM) can be roughly described as the coordinated administration of a collection of projects or programmes to fulfil certain organisational goals,” according to Patanakul (2015). “Achieving an organization's strategic business objectives is a typical focus of PPM,” he concludes. Meskendahl (2010) references Hrebiniak (2006), who claims that project portfolios are effective strategic weapons since strategy implementation is more challenging. According to Meskendal (2010), this is because project portfolios are seen as a fundamental component of project

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management putting the strategy into action Portfolio management is a complex process that can benefit from the usage of a system, and according to Patanakul (2015), such management systems can be evaluated based on process efficacy, portfolio success, and portfolio-related business success. He goes on to say that when measuring the effectiveness of a portfolio, the following constructs should be taken into account:

i. Information quality—the level of transparency attained throughout a project portfolio's entire scope of projects;
ii. Allocation quality—the effective and efficient distribution of human resources within the portfolio; and
iii. Cooperation quality—the interplay between various management levels. During a PPM process cycle, the interplay between various management positions is common.

The following guidelines, offered by Patanakul (2015), can be used to evaluate the efficacy of managing a project portfolio:

i. PPM effectiveness is a multifaceted notion that represents many stakeholder views.
ii. Factors indicating the achievement of several PPM goals from various stakeholder viewpoints are included in the dimensions (attributes) of PPM effectiveness.
iii. iii. Project portfolio management effectiveness can be roughly described as the achievement of project portfolio management outcomes in relation to numerous PPM goals and applicable limitations.

3. Company Profile

3.1 Company Vision

“To establish Religare as a globally trusted financial services brand and promote it as India's

Investment Gateway.”

3.2 Company Mission Statement

“Provide comprehensive financial services based on the key values of thoroughness and transparency.”

Brand Essence – “Diligence is the core brand essence, and Religare is motivated by ethical and dynamic wealth development processes.”

3.3 Background and history

RELIGARE Securities Ltd. (RSL) is a wholly owned subsidiary of RELIGARE Financial Services Ltd. (RFSL), which was founded by Dr. Parvinder Singh, the former CEO of Ranbaxy Laboratories Ltd.

Religare Securities Ltd.'s main objective is to provide Capital Market Operations services to Institutional Investors. The National Stock Exchange (NSE) and the OTCEI are both members of the Company. The growing list of financial institutions with whom RSL has been appointed as an authorised Broker reflects the Company's commitment to providing high-quality services. REL operates out of seven domestic regional offices, 43 sub-regional offices, and 498* cities and towns in India, with 1,837* business sites.

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REL has evolved from a primarily equity trading firm to a diversified financial services firm as a result of its business expansion. Apart from India, the REL group now has several global locations with the addition of RHH (the UK, the USA, Brazil, South Africa, Dubai and Singapore). RELIGARE was formed with the goal of delivering integrated financial services based on a trust relationship. RELIGARE provides a wide range of services, including stock and commodity broking, depository participant services, mutual fund investment advisory, and portfolio management.

RELIGARE is a pioneer in the concept of partnering to reach many places in order to successfully serve its enormous client base. Aside from RELIGARE's reach, its clients benefit substantially from the company's outstanding research competence, which includes both basic and technological knowledge.

RELIGARE has expanded its reach in health care and financial services in recent years, with multiple specialty hospitals and labs providing health care services as well as a variety of financial services such as secondary market equity services, portfolio management services, and depository services.

3.4 RELIGARE FINANCIAL RESPONSIBILITIES

Religare Securities Limited, RELIGARE Comdex Limited, and RELIGARE Finvest Limited are part of the

1. RELIGARE financial services group, which provides services in the equity, commodity, and financial services markets, as well as Religare Insurance Advisory Ltd. Member of India's National Stock Exchange and Bombay Stock Exchange.
2. National Securities Depository Limited (NSDL) and Central Depository Services Limited (CDSL) are depository participants (CDSL). A Portfolio Manager who has been approved by the SEBI.
3. RSL provides a platform for all types of investors to take advantage of the enormous opportunity presented by equities investment in India, whether on their own or through a professional advisor. 4. Religare Securities Ltd.'s ARN number is 33764. The ARN number must be available to the broker that deals on behalf of investors or sells mutual funds from several businesses.

4. Data Analysis & Interpretation

Heritage Calculations of Risk 7 Return

Date	Open Price	Close Price	Returns	Expected Returns (Ex)	D = X - Ex	D2
1-Jan-21	294.2	299.8	1.90	-0.47	2.37	5.63
4-Jan-21	301.25	297.45	-1.26	-0.47	-0.79	0.63
5-Jan-21	294.15	294.55	0.14	-0.47	0.61	0.37
6-Jan-21	296	297.6	0.54	-0.47	1.01	1.02
7-Jan-21	300.55	311.25	3.56	-0.47	4.03	16.24
8-Jan-21	318.6	306.1	-3.92	-0.47	-3.45	11.93
11-Jan-21	310.1	307.9	-0.71	-0.47	-0.24	0.06
12-Jan-21	309.45	316.8	2.38	-0.47	2.85	8.10
13-Jan-21	320.8	310.8	-3.12	-0.47	-2.65	7.01
14-Jan-21	312	311.2	-0.26	-0.47	0.21	0.05
15-Jan-21	310.2	305.2	-1.61	-0.47	-1.14	1.30
18-Jan-21	306.8	296.8	-3.26	-0.47	-2.79	7.78

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19-Jan-21	299.45	299.2	-0.08	-0.47	0.39	0.15
20-Jan-21	301.95	297.5	-1.47	-0.47	-1.00	1.01
21-Jan-21	303	289.6	-4.42	-0.47	-3.95	15.62
22-Jan-21	290.1	282.05	-2.77	-0.47	-2.30	5.31
25-Jan-21	283	270.8	-4.31	-0.47	-3.84	14.75
27-Jan-21	281.35	275.1	-2.22	-0.47	-1.75	3.07
28-Jan-21	271.2	276.2	1.84	-0.47	2.31	5.35
29-Jan-21	278.7	278.6	-0.04	-0.47	0.43	0.19
1-Feb-21	284	280.75	-1.14	-0.47	-0.67	0.45
2-Feb-21	283.5	280.65	-1.01	-0.47	-0.54	0.29
3-Feb-21	282.75	279.05	-1.31	-0.47	-0.84	0.70
4-Feb-21	280	281.5	0.54	-0.47	1.01	1.01
5-Feb-21	280.45	278.9	-0.55	-0.47	-0.08	0.01
8-Feb-21	283.5	276.5	-2.47	-0.47	-2.00	4.00
9-Feb-21	277.8	278.25	0.16	-0.47	0.63	0.40
10-Feb-21	279.95	276.25	-1.32	-0.47	-0.85	0.73
11-Feb-21	276.25	279.8	1.29	-0.47	1.76	3.08
12-Feb-21	284	279.45	-1.60	-0.47	-1.13	1.28
15-Feb-21	282.2	276.8	-1.91	-0.47	-1.44	2.08
16-Feb-21	274.3	276.5	0.80	-0.47	1.27	1.62
17-Feb-21	280	300.15	7.20	-0.47	7.67	58.77
18-Feb-21	300.05	299.5	-0.18	-0.47	0.29	0.08
19-Feb-21	299.85	312.05	4.07	-0.47	4.54	20.60
22-Feb-21	313.5	323.75	3.27	-0.47	3.74	13.98
23-Feb-21	324.05	336.15	3.73	-0.47	4.20	17.67
24-Feb-21	338.5	333.3	-1.54	-0.47	-1.07	1.14
25-Feb-21	335.1	324.25	-3.24	-0.47	-2.77	7.66
26-Feb-21	320	314.55	-1.70	-0.47	-1.23	1.52
1-Mar-21	316.2	344.95	9.09	-0.47	9.56	91.44
2-Mar-21	349	347.85	-0.33	-0.47	0.14	0.02
3-Mar-21	348	343.2	-1.38	-0.47	-0.91	0.83
4-Mar-21	342	347.25	1.54	-0.47	2.01	4.02
5-Mar-21	353	344.05	-2.54	-0.47	-2.07	4.27
8-Mar-21	346.65	340.75	-1.70	-0.47	-1.23	1.52
9-Mar-21	343.4	338.05	-1.56	-0.47	-1.09	1.18
10-Mar-21	340.95	338.95	-0.59	-0.47	-0.12	0.01
12-Mar-21	340.5	340.25	-0.07	-0.47	0.40	0.16
15-Mar-21	342.9	336	-2.01	-0.47	-1.54	2.38
16-Mar-21	336	333.25	-0.82	-0.47	-0.35	0.12
17-Mar-21	333.25	320.1	-3.95	-0.47	-3.48	12.08
18-Mar-21	324.95	317.45	-2.31	-0.47	-1.84	3.38
19-Mar-21	310	309.35	-0.21	-0.47	0.26	0.07
22-Mar-21	309.35	300.95	-2.72	-0.47	-2.25	5.04
23-Mar-21	301	308.7	2.56	-0.47	3.03	9.17
24-Mar-21	306.95	301.05	-1.92	-0.47	-1.45	2.11
25-Mar-21	298.3	292.35	-1.99	-0.47	-1.52	2.32
26-Mar-21	295	305.65	3.61	-0.47	4.08	16.65

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30-Mar-21	310	296.5	-4.35	-0.47	-3.88	15.09
31-Mar-21	296.65	294.3	-0.79	-0.47	-0.32	0.10
		Total	-28.47	Total		414.60
		Average Returns	-0.47			

Return = Close Price – Open Price

Open Price

Average Return = Total Returns / No. of Observations

Average Return = - 28.47 / 61 = -0.47

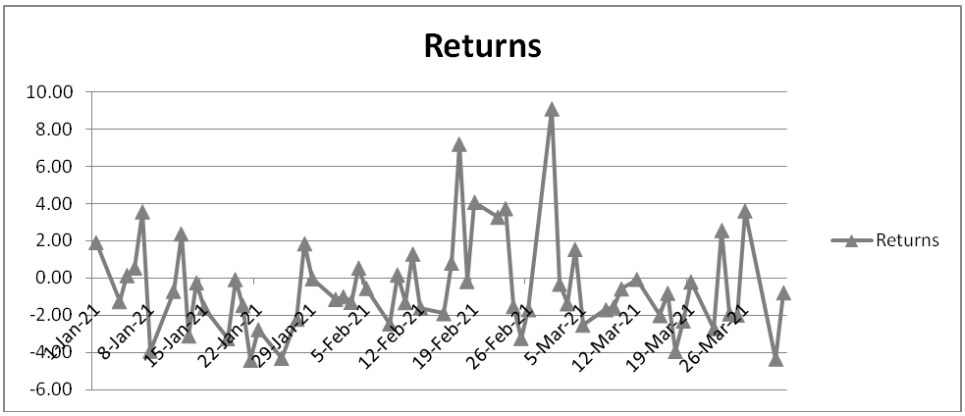
Average Return = - 0.47

S.D. (⌐) = $\sqrt{\sum d^2/N}$

S.D = $\sqrt{414.60/61}$

S.D. = $\sqrt{6.80}$

S.D. = 2.61



Interpretation

The above table shows return & risk associated with the price movement of Heritage for a month of January, February, March 2021. It has an average return -0.47 and risk is 2.61.

Correlation between Tech Mahindra and Wipro

	Tech Mahindra Returns	Wipro Returns	
Date	D(A) = X - Ex	D(B) = X - Ex	D(A) x D(B)
1-Jan-21	0.20	0.79	0.16
4-Jan-21	2.18	1.64	3.57
5-Jan-21	0.13	3.10	0.42
6-Jan-21	-0.68	0.35	-0.24
7-Jan-21	-1.07	-1.33	1.43
8-Jan-21	4.30	5.57	23.96

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11-Jan-21	1.46	2.48	3.61
12-Jan-21	-1.24	2.18	-2.71
13-Jan-21	-0.41	-0.43	0.18
14-Jan-21	-1.07	0.52	-0.56
15-Jan-21	-4.02	-3.56	14.32
18-Jan-21	0.03	-2.14	-0.05
19-Jan-21	-1.40	-0.64	0.89
20-Jan-21	2.25	2.52	5.68
21-Jan-21	-2.08	-1.28	2.67
22-Jan-21	-2.37	-0.60	1.43
25-Jan-21	-1.40	-1.77	2.48
27-Jan-21	1.95	1.93	3.77
28-Jan-21	-0.85	-2.56	2.17
29-Jan-21	-2.90	-4.46	12.92
1-Feb-21	-2.09	1.30	-2.72
2-Feb-21	0.23	0.08	0.02
3-Feb-21	1.70	0.77	1.31
4-Feb-21	-1.90	-0.83	1.58
5-Feb-21	-1.33	-1.49	1.99
8-Feb-21	1.31	1.15	1.51
9-Feb-21	-0.36	-0.20	0.07
10-Feb-21	-0.06	-0.68	0.04
11-Feb-21	1.09	-0.46	-0.50
12-Feb-21	0.12	0.45	0.06
15-Feb-21	-1.69	-1.10	1.86
16-Feb-21	-0.32	-1.89	0.61
17-Feb-21	-0.86	-1.31	1.13
18-Feb-21	2.91	0.62	1.79
19-Feb-21	-1.94	-0.74	1.44
22-Feb-21	-4.83	-2.79	13.46
23-Feb-21	-0.66	-1.00	0.66
24-Feb-21	1.06	1.29	1.37
25-Feb-21	-0.64	-0.43	0.27
26-Feb-21	-2.77	-1.83	5.06
1-Mar-21	0.06	0.83	0.05
2-Mar-21	2.39	2.55	6.10
3-Mar-21	0.39	0.58	0.23
4-Mar-21	0.84	2.31	1.94
5-Mar-21	-0.57	-4.35	2.48
8-Mar-21	0.57	-1.93	-1.10
9-Mar-21	1.56	-0.14	-0.22

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10-Mar-21	0.67	0.14	0.09
12-Mar-21	0.33	-1.46	-0.47
15-Mar-21	2.15	0.36	0.79
16-Mar-21	-0.53	0.48	-0.25
17-Mar-21	-0.39	-2.18	0.84
18-Mar-21	-3.66	-3.10	11.31
19-Mar-21	-0.26	0.38	-0.10
22-Mar-21	2.39	0.83	1.98
23-Mar-21	0.03	-0.53	-0.02
24-Mar-21	-1.16	-0.09	0.10
25-Mar-21	-2.42	-2.69	6.50
26-Mar-21	1.34	-0.22	-0.30
30-Mar-21	2.56	3.23	8.29
31-Mar-21	-3.08	-1.35	4.15
			149.51

COVARIANCE = $\frac{\Sigma da.db}{N}$ = 149.51 /61 = 2.45

Co-relation = cov/σa.σb = 2.45 / (1.84 x 1.88) = 0.71 **Portfolio Risk** $\sigma p = \sqrt{w_1^2 \ \sigma_1^2 + \ w_2^2 \ \sigma_2^2 + 2 \ COV_{1,2}}$ w_1 w $\sigma p = \sqrt{(0.16)^2(1.84)^2+(0.16)^2(1.88)^2+ 2 \times 2.45 \times 0.16}$ x 0.16 σp = 0.55

Portfolio Return

Rp = w1 r1+ w2 r2

Rp = 0.2 x -0.14 + 0.2 x –0.22

Rp = -0.07

Comparison of different combination

Combination	Portfolio risk	Portfolio Return
Heritage and Reliance	053	-0.10
Heritage and Union Bank	0.70	-0.15
Heritage and Canara Bank	0.69	-0.10
Heritage and Tech Mahindra	0.48	-0.11
Heritage and Wipro	0.51	-0.11
Reliance and Union Bank	0.62	-0.10
Reliance and Canara Bank	0.65	-0.05
Reliance and Tech Mahindra	0.47	-0.06
Reliance and Wipro	0.48	-0.06
Union Bank & Canara Bank	0.83	-0.10

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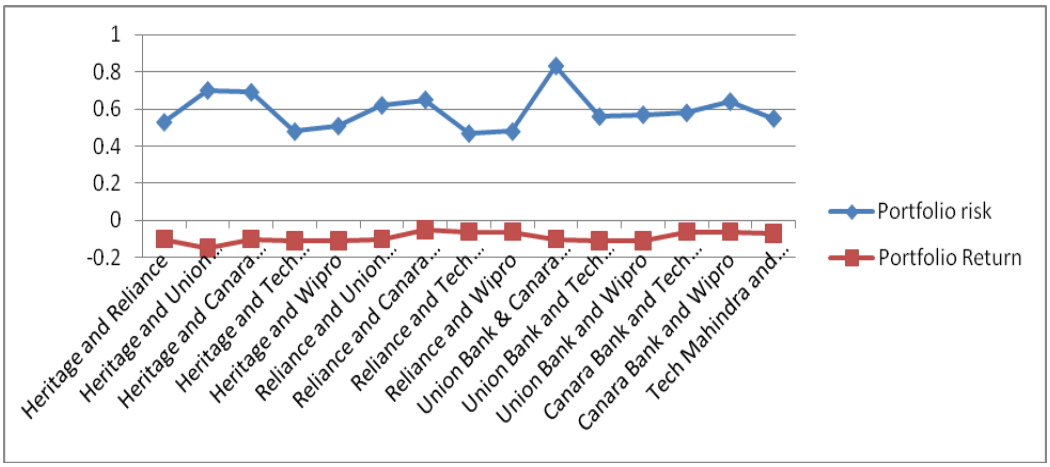
Union Bank and Tech Mahindra	0.56	-0.11
Union Bank and Wipro	0.57	-0.11
Canara Bank and Tech Mahindra	0.58	-0.06
Canara Bank and Wipro	0.64	-0.06
Tech Mahindra and Wipro	0.55	-0.07



Interpretation

From the above table and graph we can state that, all the combinations are showing the negative returns from that negative returns best one is Reliance and canara bank combination. i.e. -0.05 and portfolio is risk is 0.65

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